A Glimpse of the Pre-Washo Pronominal System

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0. The Washo language of east central California and western Nevada is one of the Hokan group of languages, located primarily in California, which has been a major concern to Professors Haas and Beeler.¹ This is an extremely disparate group of languages, with at least 13 quite distinct branches as usually construed, exhibiting pronominal systems of considerable typological diversity. Under these circumstances, as a preliminary to any attempt to attain some conception of the Proto-Hokan pronominal system, the systems of the separate branches need to be traced back as far as possible by comparative and internal reconstruction. Indeed, we now have sophisticated studies for the two branches most amenable to comparative reconstruction, by McLendon (1976) for Pomo and by Hinton and Langdon (1976) for Yuman. This I now attempt to do for Washo, a language exhibiting little dialectal diversity. This study rests in part on previous, only partly published, contributions, especially one some years ago of internal reconstruction in Washo (Jacobsen 1960a, 1960b). This concentrated primarily on phonology, although using the pronominal prefixes as key portions of evidence. Now I want to focus on the somewhat different older morphological pattern of pronouns that can be perceived, with attention to some recent suggestions about the relationship of affixal ordering to word order.

1. Table 1 lists the Washo pronominal prefixes, which occur on nouns to express their possessor and on verbs to express their subject and object.² These distinguish three persons, in addition to imperative subject, reflexive object, subjective and impersonal possessor, and absolutive. With a third person possessor or subject, a distinction is shown as to whether or not this possessor or the object is expressed by the preceding word.³

Almost all of these prefixes have different shapes depending on whether a vowel or a consonant follows, which are shown in the first two columns. In the first column $\bar{t}$ and $\bar{k}$ are glottalized or ejective stops; M is voiceless. The $\bar{e}$ is a "vowel-coloring" morphophoneme which has the effect of changing a following $i(\cdot)$ to $e(\cdot)$. The variant forms in the second column with a and $\bar{e}$ respond to regular rules of vowel harmony. (A variant with $\bar{e}$ exists also for the imperative-plus-reflexive in the first column.) In other descriptive writings I have used the $\bar{e}$ as a cover symbol for this alternating vowel, which has the effect of producing just one shape for morphemes such as the imperative prefix $\bar{g}$.⁴ But it seems wise to avoid this abstraction in the present context for the sake of direct presentation of the data.⁵ Variant forms separated by commas represent dialectal variations. The right-hand column presents the reconstructed forms that will be developed as we proceed.

Table 1. Prefixes and their reconstructions.

	<u> V </u>	<u> C </u>	
<u>subject and possessor</u>			
1 (> 3)	1 ^e -	di-	< *na-/ni-
2 (> 3)	m-	?um-, ?im-	< *m-
<u>subject</u>			
imperative (> 3)	g ^e -	ga- ~ ge-	< *ka-
<u>possessor</u>			
absolutive	d-	da- ~ de-	< *t(a)-
3 unexpressed	ṭ-	da- ~ de-	< *?-t(a)- (*t-?-)
subjective	g-	git-, gik-	< *k-, *gí k-
<u>subject and object and possessor</u>			
(3 >) expressed	?-	Ø-	< *?-
<u>subject > object</u>			
3 > 1	?1- (í-)	1a- ~ 1e-	< *?-1(a)- < *?-n(a)-
3 > 2	?m- (ṃ-)	ma- ~ me-	< *?-m(a)- (*m-?-)
3 > 3 unexpr.	ḳ-	ga- ~ ge-	< *?-k(a)- (*k-?-)
2 > 1	1e-m-	1e-m-	< *1é m-
1 > 2	mi-1 ^e -	mi-	< *mí na-/ni-
1 > refl.	di-kM-, di-M-	di-gum-	< *ni-km-
2 > refl.	mi-kM-, ?u-M-	mi-gum-	< *mí km-
impv. > refl.	ga-kM-, ga-M-	ge-gum-,	< *ka-km-
<u>subject > object and possessor</u>		~ ga-gum-	
3 > refl./impers. M-, gukM-, guM-		gum-, gím-	< *km- < *k-m-

2. These prefixes do not show number distinctions, so to supply them they may optionally be preceded by forms of the independent pronouns that are shown in Table 2. These distinguish singular, dual, and plural forms by means of suffixes, and in the first person also indicate a distinction between inclusive and exclusive categories. In the third person a distinction is made between subjective and objective forms, not paralleled elsewhere in the language, which otherwise lacks case marking of substantives.⁶ These pronouns can be seen to consist of a stem of the shape i preceded by certain pronominal prefixes. The first three prefixes, for first person, second person, and third person subjective categories, offer no problem. The prefix in the third person objective form can be formally identified with the imperative prefix g^e-, with its vowel-coloring, but this creates obvious semantic difficulties. Perhaps the prefix

here should be regarded as the same as in the subject forms, with the e-vocalism attributed to an additional, perhaps suffixed, element. The dual and plural categories are marked by suffixes -ši and -w. The vowel length in the singular results from a synchronically valid rule of lengthening of stressed vowels in final position. The inclusive category in the first person dual and plural is marked by suffixes -ši and -hu respectively, which also occur on verbs and nouns bearing the first person subject/possessor prefix. The reconstructions shown apply to the singular forms.

Table 2. Independent pronouns.

	<u>sing.</u>	<u>dual</u>	<u>plural</u>	
1 exclusive	lé·	léši	léw	< *na-í
1 inclusive		léšiši	léwhu	
2	mí·	míši	míw	< *m-í
3 subjective	gí·	gíši	gíw	< *k-í
3 objective	gé·	géši	géw	< *ka-í (*k-í-a)

3. I will now give examples of these prefixes, largely in prevocalic occurrence, in the same order as in the listing of Table 1. Two verbs for 'to eat' will be used, intransitive emlu and transitive í?wi; the former is also a noun meaning 'food'. In the following discussion the prevocalic shapes of prefixes will often be used as symbols for their morphemes.

3.1. The first three prefixes listed, first and second person and imperative, when they occur on verbs express the subject only. They are compatible with the occurrence of a third person object, and thus occur on both intransitive and transitive verbs; the object may additionally be expressed by a preceding word:

lémlu 'my food', lémluyi 'I'm eating', lé?wi 'I'm eating it', tá·daš lé?wi 'I'm eating meat'
 mémlu 'your food', mémлуйi 'you're eating', mí?wi 'you're eating it', tá·daš mí?wi 'you're eating meat'
 gémlu 'eat!', gé?ew 'eat it!', tá·daš gé?ew 'eat meat!'.

Here are additional examples showing the use of the inclusive suffixes with the first person prefix:

lémluši 'our (du. incl.) food', lémluhuyi 'we (pl. incl.) are eating', lé?ewši?wi 'we (du. incl.) are eating it', tá·daš lé?ewhuyi 'we (pl. incl.) are eating meat'.

3.2. The next three prefixes occur on nouns primarily. Absolute d- occurs on vowel-initial nouns that are not possessed. Nouns beginning with a consonant do not require this prefix, so

that its preconsonantal occurrence is only in the function of a verb nominalizer. The *t̥*- indicates a third person possessor which is not the subject of the clause nor expressed by a preceding word. And *g*- indicates that the possessor is identical with the subject of the clause, which may or may not be expressed by a word or phrase in addition to the prefix on the verb:

ḡemlu 'food'
 t̥emlu 'his food'
 gemlu 'his own food'.

The *d*- also derives nouns from intransitive verbs. These express either the action or the agent of the action:⁷

d̥asaw 'laugh, laughter' (ásaw 'to laugh')
 dah̥aʔaš 'rain' (h̥aʔaš 'to rain')
 dey̥eʔeš 'flying creature, airplane' (yéʔeš '(sing.) to fly').

Correspondingly, the *t̥*- derives nouns from transitive verbs along with their preceding objects:⁸

t̥ānu t̥išiwha 'doctor, curer, healer' (išiwha 'to cure',
 t̥ānu 'person')
 t̥ānu t̥emʔluʔ 'man-eater' (émʔluʔ 'to have as food').

3.3. The ʔ- on nouns indicates a third person possessor which is expressed by the preceding word:

t̥é·liwhu ʔém̥lu 'the man's food'.

This example shows the opposition of this prefix to the unexpressed possessor prefix *t̥*-, using the noun ānal 'house':

t̥é·liwhu ʔānal 'the man's house' : t̥ānal 'his house'.

However, there is a class of inalienably possessed kinship terms (all consonant-initial), mostly expressing consanguineal rather than affinal relatives, which never take this prefix, but show *t̥*- (in preconsonantal allomorphs *da-* ~ *de-*) for any third person possessor, whether or not additionally expressed:

t̥é·liwhu dabá·baʔ 'the man's father's father' : dabá·baʔ
 'his father's father'.

On verbs, this ʔ- indicates a third person subject, and additionally, if the verb is transitive, that the preceding word is its object:⁹

ʔém̥luyi 'he's eating', t̥é·liwhu ʔém̥luyi 'the man is eat-

ing', tá·daš ʔíʔwi 'he's eating meat'.

This object is not necessarily third person; it may be a first or second person independent pronoun:

léši ʔí·giyi 'he sees us (du. excl.)', léšiši
bišapuhayuši 'he's been making us (du. incl.)
hungry'.

3.4. The following sentences give a better idea of the distinctions expressed by these three noun prefixes. In the first two sentences 'man' is the subject and 'house' is shown by its prefix to be either his own or another's. In the last sentence, 'man', being the expressed possessor of 'house', cannot be the subject; this is indicated only by the ʔ- prefix on the verb:

té·liwhu gánala ʔípama? 'the man reached his (own)
house':
té·liwhu tánala ʔípama? 'the man reached his (another's)
house':
té·liwhu ʔánala ʔípama? 'he reached the man's house'.

3.5. The following examples illustrate a marginal use of the g- subjective possessor prefix on verbs in indirect discourse, when the direct discourse was in the first person. As opposed to verb forms with the ordinary third person prefixes ʔ-, k- (for direct discourse in the third person), this has the effect of indicating identity with the subject of the following higher clause. It thus serves the same function as the switch-reference suffix used on verbs in other circumstances.¹⁰ The corresponding direct discourse is given in parentheses:

gíʔsuktiʔa? ʔítlegi 'he₁ said he₁ would bring it'
(léʔsuktiʔgi 'I'll₁ bring it') :
kíʔsuktiʔa? ʔítlegi 'he₁ said he₂ would bring it'
(kíʔsuktiʔgi 'he'll bring it').

3.6. The next three prefixes of our list (under the heading subject > object in Table 1) are single morphemes occurring on transitive verbs to express a third person subject acting on a first, second, or third person unexpressed object. These examples contain the transitive verb í·gi 'to see':¹¹

ʔlí·giyi 'he sees me'
ʔmí·giyi 'he sees you'
kí·giyi 'he sees him'.

The parenthetical í-, m- of the Table reflect a conceivable alternative analysis recognizing glottalized resonants, which, however, would not contrast with clusters of ʔ plus resonant.¹²

There is also a class of ten reciprocal kinship terms for the descending generation, derived from some of the inalienably possessed kinship terms mentioned in sec. 3.3 (cf. sec. 5.1), which take these objective prefixes (in preconsonantal allomorphs la- ~ le-, ma- ~ me-) to express a first or second person possessor:

labá'pa? 'my son's child (man speaking)'
mabá'pa? 'your son's child (speaking to man)'.

Thus 'my son's child' is more literally 'the one having me as father's father'. For a third person possessor, however, these terms show the same exclusive use of t- as do the underlying inalienably possessed stems:

té'liwlu dabá'pa? 'the man's son's child' : dabá'pa?
'his son's child'.

3.7. These examples show the contrast of the expressed and unexpressed object prefixes for third person objects:

tá'daš ʔí'wi 'he's eating meat' : kí'wi 'he's eating it'
té'liwlu tá'daš ʔí'wi 'the man is eating meat' :
té'liwlu kí'wi 'the man is eating it'.

It will be seen that this choice of prefixes avoids a potential ambiguity as to whether a single noun preceding a transitive verb is its subject or its object.

3.8. The next two items on our list are basically sequences of two morphemes expressing combinations of first and second person subjects and objects. These occur in the order object-subject (o-s-), although, in the preconsonantal variant for first person acting on second (mi-), there is no piece that can straightforwardly be identified as the subject marker:

lemí'gihé'si 'do you see me?'
milí'giyi 'I see you'.

3.9. The remaining prefix sequences contain the prefix which, when occurring on verbs, indicates reflexive or reciprocal object (km-, gum-, etc.). This always follows the subject prefix when it is overt, giving a prefix order subject-object (s-o-). Thus it seems appropriate, in the case with a third person subject (the last listed), to assume that this subject marker is also present, in its regular preconsonantal zero allomorph, preceding the reflexive/reciprocal object marker. This object marker on verbs may thus be regarded as more of an inner-layer, derivational prefix, which derives intransitive verbs from transitive ones, which is to say that it excludes the presence of any other object prefix.

What is at least etymologically this same reflexive object marker occurs also on nouns to indicate that they are characteristic of or appropriate to the entity, usually an inanimate object,

expressed by the preceding word. The following examples contrast this prefix with the ʔ- indicating an expressed possessor:

ʔáʔnip Maʔal 'boat-house' : té·liwhu ʔaʔal 'the man's house'
ʔló·š Míšim 'dance song' : báʔlew ʔíšim 'Paiute song'.

There are some additional variant forms of this prefix beyond those shown in Table 1. The preconsonantal dialectal variant gim- that is shown with third person subject likewise occurs in all forms in place of gum-. Prevocally, in addition to forms with M- and kM-, there occur throughout, as shown only for third person subject, longer forms with guM- and gukM-. Although both shorter and longer forms occur in some dialects, there is no apparent semantic distinction between them; for some speakers the longer forms seem to be preferred after pause. For third person subject a shape kM- also occurs in some dialects when this prefix is phonologically linked to a final vowel of a preceding word. Note that the second person subject marker preceding most forms of this prefix has the shape mi- instead of expected *ʔum-, which is true also before a few other derivational prefixes.

4. To summarize now the patterns found, the correlation of prefixal forms with categories expressed is imperfect. Some single morphemes express single categories, of possessor or subject. The ʔ- prefix expresses at least one (third person) category, but on transitive verbs refers additionally to the expressed object. Other single morphemes express combinations of subject and object, namely third person subject acting on first, second, or third person object. Other combinations are expressed by sequences of two morphemes, both s-o- (with reflexive object) and o-s- (when first and second persons are combined). But by internal reconstruction it seems to be possible to discern a more homogeneous earlier system.

5. The basic pattern of sound changes that have been assumed in these reconstructions can now be summarized, although no attempt will be made here to completely justify them. A former series of plain stops (*p, etc.) has become voiced (b, etc.) before vowels, but voiceless (p, etc.) syllable-finally (i.e., before another consonant or word-finally). In syllable-final position these have been joined by former glottalized stops (*p̚, etc.), which have lost their glottal closure. Voiceless aspirated stops (p̤, etc.) before vowels come from former consonant clusters whose exact constitution is difficult to discern (but probably included such as *kp > p̤ initially and *hp > p̤ medially) and which may have included geminated consonants at some stage (such as *kk > k̤).¹³ Some glottalized stops, but by no means all, can be seen to have come from clusters with glottal stop either preceding or following plain stop (so p̚ would come from *ʔp or *pʔ). And the voiceless resonants, limited to prefix- or stem-initial position before vowels and occurring in few morphemes, have as at least their primary source clusters of *k plus voiced resonant (so M is from *kM,

which still occurs in dialect variants postvocally, although not initially or postconsonantly; this in turn is from *km).

5.1. As the derivation of glottalized stops from clusters containing *ʔ is central to this reconstruction, the evidence other than that of these pronominal prefixes leading to this conclusion will be presented.

An "attributive-agentive" affix must have consisted in part of an infix -ʔ- in the allomorph used for some stems with medial resonants or plain stops. Among other things, this derives reciprocal kinship terms for the descending generation.¹⁴ Thus from diʔamaʔ 'my father's mother' (< *ni-ʔamaʔ) is derived laʔáʔmaʔ 'my son's child (woman speaking)' (< *ʔ-na-ʔaʔmaʔ) (cf. sec. 3.6 for the objective prefix), where the infix -ʔ- is seen before the resonant m. But when the underlying stem in this formation has a medial voiced stop (from plain stop), the derivative has the corresponding glottalized stop. Thus beside dibáʔbaʔ 'my father's father' (< *ni-pápaʔ) we have labáʔpaʔ 'my son's child (man speaking)' (< *ʔ-na-páʔpaʔ). One thus assumes that this glottalized stop has arisen from the coalescence of the plain stop with the preceding infix -ʔ- (in this example, p < *ʔp).

5.2. The verb stem ipam 'to arrive (elsewhere)' is probably derived from an earlier form of i·biʔ 'to have come' by the addition of a suffix -am, which seems to mean basically 'hence toward a goal'. The stem i·biʔ would come from earlier *ipiʔ; when this suffix was added there would have been loss of the medial vowel to give the contracted form *ipʔ-am, giving rise to a *pʔ cluster, which became the p. This stem is also stigmatized as having a secondary origin by its vocalism, since in stems of the older stratum *a has become e after i. These forms illustrate also a general historical process of lengthening of stressed vowels in formerly open syllables.

5.3. Certain forms point to an older deictic prefix *k-, referring to or emphasizing the subject, which usually precedes the pronominal prefixes, although sometimes seems to follow them. This gives rise to k when *ʔ followed, to a voiceless resonant when a resonant followed (M- < *k-m-, etc.), and to a voiceless (rather than voiced) stop when the corresponding voiceless stop followed. (t- < *k-t-, k- < *k-k-). Table 3 shows the corresponding locational and equational forms of the verb eʔ 'to be'.

Table 3. Forms of eʔ 'to be'.

locational	equational		
léʔi	Léʔi	'I am'	L ^e - < *k-l ^e - < *k-na-
méʔi	Méʔi	'you are'	M- < *k-m-
ʔéʔi	kéʔi	'he is'	k- < *k-ʔ-

The locational forms take the usual intransitive subject prefixes and express location, as in danala ʔéʔi 'he's in the house'. The equational forms tell what someone or something is, as in wa·šiw

ké?i 'he's a Washo'.

A few additional examples involving wá? 'to do' show other combinations:

wá?i 'he did it' : géwe Wá?igi 'Coyote is the one who did it'

diwá?i 'I did it' : lé· tiwá?i 'I'm the one who's doing it'

?uwa?i 'you did it' : kuwá?i 'you're the one who did it'.

The right-hand items show respectively W- < *k-w-, ti- < *k-ti- < *k-ni-, and ku- < *k-?um- (m- is regularly lost before w).

A k- sometimes appears before the voiceless resonants in some dialects when a vowel ends the preceding word:

wí·di? cí·ki kWá?igi 'this Spider is the one who did it'.

These examples of initial k- are clearly from *k-?, but this is not necessarily the case for the unexpressed object prefix k-. This evidence, together with that of the pronominal prefixes themselves, suggests that we cannot determine on purely phonological grounds the exact former position of the *?.

5.4. One other general consonantal sound change assumed is loss of initial *? when before two consonants, but not before a single consonant followed by a vowel. This loss would, of course, preclude the possible development of glottalized stops in the way that has just been discussed. This would apply to the preconsonantal allomorphs of the four pronominal prefixes whose prevocalic shape is a glottalized stop or a ?-plus-resonant cluster. This means that the vowels of the preconsonantal allomorphs--the a's that are in parentheses in my reconstructions--were not present at an early stage. Thus, e.g., *?1- before vowel remained, but before consonant became *1-, then *1a-, and finally la- ~ le-. Whether this loss of *? would have applied also to the middle member of an initial three-consonant cluster (*C?C-) is uncertain, so that here, also phonological criteria for order are indefinite (i.e., ?1- (1-) might be from *1?-). Why the *?- marking third person was itself completely lost before initial consonants, including single ones, is harder to explain, but probably results from analogical spread of the loss that originated before formerly more numerous initial consonant clusters.

5.5. This conclusion about vowels is compatible with other evidence. The vowel-coloring e, with its lowering effect on i, must go back to former *a, so *ai > e. Likewise the preconsonantal vowels a ~ e by vowel harmony must go back to *a. There does not seem formerly to have been an *e in the language apart from such sources of vowel contraction and vowel harmony. Although it is apparent only in the imperative prefix among those shown, the total list of derivational prefixes--so-called "instrumental prefixes"--makes it clear that in general prevocalic e-coloring correlates with the preconsonantal harmonizing vowel. Furthermore,

there are clear synchronic rules calling for the insertion of the harmonizing vowel (former *a) after at least initial w- and l- before another consonant. Thus, for w-, beside forms with nominalizing da- ~ de- such as dawmāhim 'cloud' and dewdīʔiš 'tree' one finds wamāhmi 'it's cloudy' and wedīʔši '(tree) is standing'. The latter show the harmonizing vowel which is absent when a prefix ending in a vowel precedes. These facts mean that we have to be guided primarily by prevocalic e in recognizing a former *a of any great antiquity in our prefixes.

5.6. Somewhat similarly, it seems that *m- initially or after an initial consonant and before another consonant has joined the "conspiracy" against initial consonant clusters by generating a preceding u or i. Thus the reflexive object marker gum-, gim- would come from older *km- before consonant. Second person subject/possessor prefix *m- would have become ?um-, ?im-, where the ?- is an automatic concomitant of the consonant-initial syllable pattern. A difficulty here comes from the differential treatment of what would also have been *mC- in the marker of second person object with third person subject, but which became *maC- instead. This may correspond to a difference of chronology (the *a being a later development), but also doubtless to analogical pressure, after the *a that had developed after certain consonants came to be felt as a characteristic of objective prefixes.

5.7. An alternative hypothesis to that of sec. 5.4 also suggests itself. This would have it that there never was a *? in the preconsonantal allomorphs. The ?- that is now a third-person marker was originally part of the stem, and third person was marked by the lack of any prefix. Then there would have arisen a reinterpretation to give a third person prefix with shape ?- before vowel and Ø- before consonant. This prefix would subsequently have been combined with an object marker to give, e.g., *1-?-V- but *1-Ø-C-. Under this approach, ?1- would be from *1-?- , and a vowel *a would have developed later before the consonant. Or alternatively, there might have been a cliticized pronoun such as *la-, with coalescence of vowels across ? (*1a-?-V₁ > *1?V₁, *1a-C remaining), although the lack of e-coloring prevocalically would be a serious difficulty with this idea. And there would no longer be the problem of accounting for the loss of *?- before single initial consonants. Sec. 6.4 discusses further the morphological ramifications of this hypothesis.

5.8. One final phonological consideration that needs to be remarked upon is the reconstruction of *n in the first person prefix, where we have alternating l- and d-. This was guided partly by forms in other languages, but it is also clear that Washo has largely gotten rid of former *n by one means or another.

6. Armed with these phonological tools, we can now begin to strip off the recent layers of the pronominal system.

6.1. As I have discussed elsewhere (Jacobsen 1972), it is clear that the inclusive/exclusive distinction is a relatively recent innovation in the language under areal influence. This category occurs among other Hokan languages only in the Palaihnihan

languages, primarily Achumawi, which belong to the same area. This arose from reduplication of the suffixes on the dual and plural pronouns, with their subsequent spread to nouns and verbs. The suffixes -ši and -w for dual and plural number occur elsewhere in the language, on numerals and demonstratives, and may have Hoka cognates. In some cases they have secondarily taken on the expression of a 'human' gender-like category (Jacobsen 1976b). Thus it is to the pronominal prefixes that we must look to find most of the older system, and where we can also discern several layers of structure.

6.2. In the first place, the two sequences representing combinations of first and second persons must result from a recent cliticization of the independent pronouns. This is completely consistent with the syntax of the first and second person subject prefixes, which may be preceded by a word expressing their object. That the first piece here is just the independent pronoun is shown in the case of the first person by the vowel being always e, not alternating with a, and indeed by the occurrence of expanded forms under conditions of elicitation, with the pronoun stressed (lé·m-/ʔum-). The mi- preconsonantal variant ($1 > 2$) must come from expected *mi-di- by haplology.

6.3. For the prefixes expressing third person subject plus an object, our reconstruction of *ʔ- lets us see that these go back to sequences of two prefixes, probably in the order s-o-. The first was this *ʔ- representing the third person subject; the second can be equated with what are now subject pronouns when occurring alone, but which here express the object. These object markers were used only if the object was not expressed by a separate preceding word or phrase (much as with English object pronouns). This is the reason that the ʔ- occurring alone, which originally indicated only subject, now has taken on the additional implication that an expressed object precedes; i.e., this was originally signalled by the mere absence of a following object marker. As has been explained, the opposite ordering of the two prefixes cannot really be excluded on phonological grounds; this would give us an o-s- order but would not otherwise affect these conclusions. Table 1, for lack of space, does not show the alternative *1-ʔ- < *n-ʔ- for third person acting on first.

6.4. It was indicated in sec. 5.7 that the third person prefix ʔ- ~ ∅- might have originated from resegmentation of initial ʔ on stems. This assumes that stems beginning with this consonant were in reasonably high proportion to those beginning with vowels, as is the case, for example, in Karok. This might have happened because of the development of a phonological rule that ʔ- was lost when a consonantal prefix was added.¹⁵ This assumption would have the advantage of explaining the ∅- allomorph before consonants, and of correlating with the fact that there are disproportionately few stems beginning with ʔ that are either verbs or nouns of the type that would commonly be possessed; only for inalienably possessed kinship terms, where another overt prefix is always present (sec. 3.3), are stems of this shape numerous in proportion to the

total size of the class (and note that these nouns never take ʔ-).

Before this development we would have had the common situation where a third person argument is unmarked. Thus, e.g., for the possessive construction with the ʔ- prefix on the possessed noun, this now means 'third person expressed possessor', but formerly would have meant 'third person possessor (whether expressed or not)', and according to this hypothesis, at an earlier time there would have been no prefix and the genitival relationship would have been shown by simple juxtaposition. There is no a priori reason to prefer either of these latter two alternatives; they are both very widely attested (Ultan 1970).

So that the third person prefix would be contiguous to the following phoneme conditioning its shape, this hypothesis would probably point to an order like 1-ʔ-, i.e., o-s-, when it was combined with an object marker.

6.5. The absolutive function of d- (< *t-) is likely to be historically secondary to its nominalizing function. Nouns derived from verbs by means of this prefix cannot be directly possessed. Vowel-initial verb stems being quite common, this led to the analogical spread of d- so that it came to be required on vowel-initial noun stems that have no other pronominal prefix, thus maintaining (if not initiating) the consonant-initial canonical form of words. This spread would have been aided by those vowel-initial stems that were, or became, freely possessable nouns as well as verbs, such as emlu 'to eat; food', ašan 'to bleed; blood', ānal 'to build a house; house'. Thus there developed a correlation between phonology and morphology: the vowel-initial nouns are a special sub-type of noun that require the absolutive prefix, whereas consonant-initial nouns do not.

6.6. The unexpressed possessor prefix t- would come from the *ʔ- plus a *t- prefix. Perhaps the latter was the same as the absolutive prefix, but there is another candidate in an "attributive-instrumental" prefix which has the shape ʔit- when initial in a word. When added to a verb this derives a noun for an instrument, 'for ...-ing', but more clearly relevant is its function when added to nouns, where it allows some nouns referring to entities that are not normally possessed to take possessive prefixes with a meaning 'characteristic of ...'.¹⁶ This prefix probably developed from a *t-, which always occurs syllable-finally (hence did not become *d-); on vowel-initial stems it is followed by another prefix d- or ʔ-, with some dialectal differences. The -t-allomorph is seen after first person di- (di-t-) and third person da- ~ de- (da-t- ~ de-t-). An allomorph -it- occurs after second person m- (m-it-) and subjective possessor g- (g-it-); this has probably developed by resegmentation of forms including the independent pronouns: m-it- < *mí t-, g-it- < *gí t-. This git- has come to be a preconsonantal allomorph of g-, found on nouns that otherwise do not require this intervening prefix. The -it- seems to have spread analogically to become the shape after ʔ- (ʔ-it-), and since ʔit- is ambiguously analyzed as ʔ-it- or ∅-ʔit-, this has become the shape of the prefix also when no other prefix pre-

cedes. It is difficult to know whether this $*t-$ is ultimately the same as absolutive $d-$ ($< *t-$) in spite of their present-day contradictory meanings ($d-$ means 'unpossessed', $?it-$ means 'possessable'). It is also difficult to decide whether $t-$ as possessor of nouns has the same origin as in its function of nominalizing transitive verbs. These uncertainties coupled with those concerning the origin of $*?-$ (sec. 6.3, 6.4) leave one wondering whether $t-$ comes from $*?-t-$ or from $*t-?-$.

6.7. We can also see now in several formations the former presence of a $*k-$ which had anaphoric reference to a third person argument more distantly related to the verb than that referred to by $*?-$, such as an object which is not otherwise expressed or a subject expressed elsewhere in the clause. A synchronic connection would not readily be made among the occurrences of this $*k-$, which turns up as the subjective possessor prefix, as an object marker, on the third person pronoun, and as the deictic prefix of sec. 5.3. The preconsonantal shape of the possessive prefix $g-$, synchronically $g-it-$ but historically probably $*gīt-$, was discussed in the preceding section. A dialectal variant $gik-$ doubtless comes from this $*k-$ itself also preceded by the independent subjective pronoun, $*gīt k-$.

6.8. Digging back a layer deeper, I would suggest that the reflexive/reciprocal marker $*km-$ was originally not preceded by subject markers, but was itself a sequence of two morphemes, again the $*k-$ followed by an intransitivizing $-m-$ that is still found in the language.

This $-m-$ has developed a range of preconsonantal forms analogous to those of $?it-$ (sec. 6.6), presumably by similar processes. It is $-m-$ after first person $di-$ ($di-m-$), imperative $ga-$ ~ $ge-$ ($ga-m-$ ~ $ge-m-$), and nominalizing $da-$ ~ $de-$ ($da-m-$ ~ $de-m-$), and $-im-$ after second person $m-$ ($m-im-$).¹⁷ After third person $?-$ it has the shapes $-um-$ and $-am-$ ~ $-em-$ in different dialects ($?-um-$, $?-am-$ ~ $?-em-$) (cf. the suggested sound change of sec. 5.6). On some vowel-initial stems, the $-m-$ is infixated after the vowel. With this prefix we get pairs of related transitive and intransitive verb stems:

$dibikidi$ 'I'm boiling it' : $dimbikidi$ 'I'm boiling'
 $gebikidi$ 'she's boiling it' : $?umbikidi$ 'she's boiling'.

After this origin of $*km-$ became obscure, the third person form would have been felt to contain a preceding $\emptyset-$ prefix, and then the subject markers for other persons would have also been added. Thus the reflexive/reciprocal affix would have its origin in a "middle voice" marker, much as in early Indo-European.¹⁸

The $mi-$ marker of second person subject before this prefix is clearly the cliticized independent pronoun, perhaps to avoid the repetition in expected $*?um-gum-$. The longer prevocalic forms $guM-$, $gukM-$ certainly result from an analogical spread of preconsonantal $gum-$ to come before $M-$, $kM-$, with regular absorption of the $-m-$.

7. We have recognized a late layer of cliticization of independent pronouns, and moreover, by finding that certain prefixes go back to a sequence of two, we have been able to recover a one-to-one correlation of semantic categories and prefixal morphemes. Some uncertainty was encountered as to the original relative order of these prefix sequences containing *?. If it was o-s-, we would be seeing the result of an earlier wave of cliticization of preceding independent pronouns parallel to the later wave of sec. 6.2. If it was the somewhat preferred s-o-, we would have had greater congruence with the word order of the language, SOV. Indeed, the language is what Lehmann (1973) would call a "consistent" OV language, with causative, negative, and interrogative markers following the verb, and with possessors and relative clauses preceding nouns. In either case, this suggests a minor amendment to the principle proposed by Givón (1971) that the order of affixes on verbs would correspond to the former word order, and that any discrepancy would point to a subsequent change of word order. This principle has been used in reconstruction among American Indian languages, for example, by Ingram (1975) for Salish (commented on by Noonan 1976) and in part by Steele (1976) for Aztec.¹⁹ In the Washo case, while there was indeed a former congruence of affixal order and word order (at least to the extent of o-V matching OV), there is no reason to suspect any change in the latter. Instead, this pattern has become obscured by changes in the prefixes due to phonological coalescence and subsequent cliticization of other pronouns.²⁰

8. Finally, to briefly sample the Hokan picture. As indicated, the pronoun systems are disparate among the languages usually mentioned as belonging to this group. For instance, Pomo lacks pronominal affixes on verbs, and in Yana they are entirely suffixed. If, however, we compare a couple of branches where the pronominal affixes are largely or completely prefixes, Karok and Yuman, we do find some agreements with these results obtained for Washo.

Karok (Bright 1957:56-64, sec. 400-526) shows the similarities of having a first person singular prefix, subjective ni-, objective ná-, possessive nani- ~ nini-, beside independent pronoun ná. These are opposed to plural forms stigmatized with a vowel -u-: subjective nu-, possessive nanu- ~ nunu-, independent pronoun nu. (Cf. pre-Washo first person subject/possessor *na-/*ni-, object *n(a)- or *n?- (*na?-), independent pronoun *na-i.) There is a second person singular possessive prefix mi-, beside independent pronoun ʔi.m (cf. pre-Washo subject/possessor *m-, independent pronoun m-i). In some combinations there is an imperative prefix ká- (cf. pre-Washo *ka-). The third person singular subjective ʔu- might be compared to pre-Washo *ʔ-. And Karok has an impersonal possessor prefix kuma-, which resembles pre-Washo *km-, although it does not share the latter's function as a reflexive-reciprocal object marker on verbs (and therefore gives no confirmation of the suggested further analysis *k-m- of sec. 6.8).

Proto-Yuman (Hinton and Langdon 1976) shows a first person

prefix $*n^y$ - beside independent pronoun $*n^y a$ (alongside of first person $*?^-$); second person $*m^-$ with independent pronoun $*ma$, and imperative $*k^-$. The Diegueno third person subjective prefix $w^- \sim \emptyset$ - might conceivably be compared to Karok $?u^-$ and thereby to pre-Washo $*?^-$. The striking resemblance of the prefix reconstructed by these authors as $*?n^y$ - for third person acting on first to pre-Washo $*?n(a)$ - or $*n^y?$ -, backed up by the corresponding La Huer-ta Diegueno prefix $n^y?$ - paralleling $m^y?$ - for third person acting on second (pre-Washo $*?m(a)$ - or $*m^y?$ -) suggests a reopening of the question of whether there was a $*?^-$ (or perhaps $*?u^-$) for third person in pre-Yuman.

Karok has a suffix $-ap$ indicating plurality, which might be compared to the prefix pa^- of the Yuman Pai languages.

It was indicated in sec. 6.5 that the nominalizing function of d^- was probably prior to its absolutive function. Although not considered pronominal, both Yuman and Karok have analogous nominalizing (but not absolutive) prefixes. Yuman $*k^w$ - nominalizes words and clauses and is mutually exclusive with the pronominal prefixes.²¹ Karok pa^- (Bright 1957:120-122, sec. 810-812) also nominalizes words and clauses, but does not preclude the occurrence of pronominal affixes. On nouns it has taken on the function of a definite article and may precede a possessive prefix. Washo d^- nominalizes only words, not clauses, as the latter function has been taken over by some secondarily developed suffixes (cf. fn. 6). I would be very tempted to connect Yuman $*k^w$ - and Karok pa^- as reflecting $*k^w$ -; whether Washo d^- (< $*t^-$) can be phonologically equated is even more uncertain.²²

With the $*-t^-$ discussed in sec. 6.6 it is tempting to compare Yuman Diegueno $-n^y$ -, which follows possessive prefixes, allowing them to occur on nouns that are not inherently possessed (Langdon 1970:144-145, sec. 7.132). Another striking analogy to Washo seen in Yuman as represented by Diegueno is the fact that only kinship terms have a third person possessive prefix, $pa^- \sim pa^-$ (Langdon 1970:144, sec. 7.131) (cf. sec. 3.3).

NOTES

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²The possessive prefixes also occur on a few adverbial stems, where the meaning is like a preposition with the pronoun as its object (parallel within Washo to an independent pronoun taking a postposition). These stems are certainly old nouns or nouns plus postpositions. Cf. Jacobsen 1964:391, sec. 6.4.2, and 438-440, sec. 9.

³Another language exhibiting this expressed/unexpressed distinction for third person possessor and object in its system of pronominal prefixes is Hishkaryana (but not related Apalai) of the Carib family, according to Gudschinsky (1966). Here y^- indicates

immediately preceding free object of a verb with third person subject, or possessor of a noun. On nouns this is opposed to t- for a possessor referent the same as the subject of the verb in the same clause and i- for a possessor referent other than the subject (a distinction also made in Washo). On verbs this y- is opposed to n- for a third person subject of a transitive verb without immediately preceding free object. The Hishkaryana pattern differs from the Washo one in that it is the n- prefix for unexpressed object that is used also to indicate a third person subject of stative and intransitive verbs (in Washo it is the ?- prefix for expressed object that occurs on intransitive verbs).

The process of the development of this opposition in Hishkaryana, as best one can determine from the inadequate evidence available, seems to be quite different from that for Washo. Unlike what is suggested below, there is no need to assume that any of the relevant prefixes result from the coalescence of two successive prefixes. The n- seems to have originally meant third person (also first person plural exclusive) subject on stative/intransitive verbs and on transitive verbs with a third person object (whether expressed or implied). Nouns took only the t- subjective or i- non-subjective prefixes for third person possessor (all this is the situation in Apalai). Then these semantic spheres were encroached on by the spread of y- for expressed (and contiguous) object/possessor, which originally may have meant just first person plural exclusive object/possessor, a category which requires a preceding free pronoun (Apalai ina, Hishkaryana amna). Thus the meaning of y- shifted from expressing just this category to implying the preceding object/possessor word, which originally this category uniquely entailed.

This expressed/unexpressed categorial distinction seems to be quite rare. Normally one assumes an overriding syntactic pattern such that pronouns of a given series (subjective, objective, possessive, etc.) are either retained or dispensed with in the presence of a co-referential substantive. This kind of pronominal reference directly to other items of the same text (somewhat like switch-reference) has traditionally been under-recognized and is not to be found explicitly mentioned in textbooks on general linguistics nor in recent inventories such as Ingram 1971, Moravcsik 1970, 1974, and Ultan 1970.

⁴Cf. Jacobsen 1964:285-286, sec. 3.8.1, on prevocalic occurrences; 296, sec. 3.9.1, on preconsonantal occurrences; and 300-302, sec. 3.10, for the vowel harmony rules.

⁵For preconsonantal imperative-plus-reflexive, some speakers have only ge-gum-, and others have this alternating with ga-gum-, this difference reflecting a dialectal difference in the conditioning of vowel harmony. In addition to the last reference of fn. 4, cf. Jacobsen 1974a.

⁶A partial exception is the marking also of nominalized clauses for subjective/objective, but the endings for this, -gi and -ge, are clearly just unstressed variants of the same third person singular pronoun. Cf. Jacobsen 1967:243, 247-248 for

examples.

⁷Cf. Jacobsen 1964:486-487, sec. 14.2.

⁸Cf. Jacobsen 1964:488, sec. 14.3.

⁹Jacobsen 1974b discussed the incipient ergativity in these subject/object expressions.

¹⁰For switch-reference in Washo, cf. Jacobsen 1967:242-248. More widespread than the ending -ti'a? of these examples would be the contracted form -ta?.

¹¹The i morphophoneme beginning this stem reflects the fact that it idiosyncratically resists e-coloring (for discussion, see Jacobsen 1964:292-295, sec. 3.8.5c).

¹²The pros and cons of such an analysis are discussed in Jacobsen 1964:74-78, sec. 1.7.9.

¹³Cf. Jacobsen 1976a for somewhat similar conclusions regarding Yana, another Hokan language.

¹⁴Cf. Jacobsen 1964:352-358, sec. 4.17, for the allomorphy of this affix; 475-476, sec. 13.9, for the derivation of these reciprocal kinship terms; 555, sec. 23.3, for other derivatives with this affix.

¹⁵For a similar situation regarding nouns in Diegueño, cf. Langdon 1970:127, sec. 6.122.

¹⁶Cf. Jacobsen 1964:350, sec. 4.14, for the form of this prefix; 468-469, sec. 13.3, for its occurrence on nouns; 488, sec. 14.4, for its occurrence deriving nouns from verbs.

¹⁷However, after non-initial nominalizing d- this has the shapes -um-, -im-: ?itdumbikit, ?itdimbikit 'poť', literally 'for boiling'. Cf. Jacobsen 1964:349, sec. 4.8, and 350, sec. 4.14, for the allomorphy of this prefix, and 542-543, sec. 22.5, for derivation with it.

¹⁸The pronominal origin of this reflexive/reciprocal affix is suggested by its prefixed position. Lehmann (1973) observes that in OV languages there is commonly a verb suffix marking reflexive/reciprocal. However, his examples come from languages with pronominal suffixes on the verb.

¹⁹It should be emphasized that Givón's examples concern primarily object pronoun affixes (1971:394-397, sec. 2, but cf. 402-403, sec. 3.4) and whether they precede or follow the verb stem, not the relative order of subject and object affixes. As Lehmann's (1973) approach implies, these correlations can be expected to be better for object markers than for subject markers. Noonan (1976:366) points out that many SOV languages have subjective pronominal suffixes on verbs (V-s). Because of cliticization of object pronouns, many would also be expected to have an o-s-V order of pronominal prefixes.

²⁰One might think of this phonological absorption as paralleled in the area of syntax by word order change by noun incorporation, as in Aztec, one factor tending to create verb-initial order according to Steele: the original elements remain present in the same order, but some boundaries between them are erased.

²¹Cf. Langdon 1970:142-143, sec. 7.12, and 176-177, sec. 9.521, for the distribution of the Diegueno prefix k^w- ~ ku-.

²²In a wider treatment of the Hokan family, Salinan t- and even Yana absolutive -na would appropriately come into account.

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